



Standard Terminology of Building Economics¹

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1. Scope

1.1 This terminology relates to the economic evaluation of building construction as used in other standards under the jurisdiction of ASTM Committee E-6 on Performance of Building Constructions, and does not necessarily correspond to the terminology used in other areas of accounting and economics.

DEFINITIONS

adjusted internal rate-of-return (AIRR)—the compound rate of interest that, when used to discount the terminal values of costs and benefits of a project over a given study period, will make the costs equal the benefits when cash flows are reinvested at a specified rate. (Syn. *financial management rate of return (FMRR)*)

annual value—a uniform annual amount equivalent to the project costs or benefits taking into account the time value of money throughout the study period (Syn. *annual worth, equivalent uniform annual value*).

annual worth—See **annual value**.

annually recurring costs—those costs that are incurred in a regular pattern each year throughout the study period.

base date—See **base time**.

base time—the date to which all future and past benefits and costs are converted when a present value method is used (usually the beginning of the study period) (Syn. *base date*).

benefit-cost analysis—a method of evaluating projects or investments by comparing the present value or annual value of expected benefits to the present value or annual value of expected costs.

benefit-to-cost ratio (BCR)—benefits divided by costs, where both are discounted to a present value or equivalent uniform annual value (Syn. *benefit-cost ratio*).

breakeven analysis—a technique for determining that value of a variable which results in benefits (savings) just equal to costs.

building decision—a decision regarding the design, financing, engineering, construction, management, or operation of a building.

building economics—the application of economic analysis to

the design, financing, engineering, construction, management, operation, ownership, or disposition of buildings.

building system—an aggregation or assemblage of items joined in regular interaction or interdependence in buildings or building construction.

capital cost—the costs of acquiring, substantially improving, expanding, changing the functional use of, or replacing a building or building system.

cash flow—the stream of monetary (dollar) values—costs and benefits—resulting from a project investment.

certainty equivalent technique—a technique used to adjust economic measures of project worth to reflect risk exposure and risk attitude.

DISCUSSION—Estimated project returns are multiplied by a certainty equivalent factor (CEF) to determine the *certainty equivalent* amount a decision maker finds equally acceptable to the estimated project returns.

constant dollars—dollars of uniform purchasing power exclusive of general inflation or deflation.

DISCUSSION—Constant dollars are tied to a reference year.

construction contingency—the funds added to estimated and known costs in case of cost overruns during construction.

construction documents—materials that convey the physical, aesthetic, technical, performance, and administrative requirements necessary to initiate a contract for construction of the proposed project.

cost analysis—subdividing the project estimate into component parts to find and compare their relationship to previously established historical costs.

cost effective—the condition whereby the present value benefits (savings) of an investment exceeds its present value costs.

cost limitations—the budget boundaries for project elements.

cost model—the description of the project divided into discrete elements showing quantities and unit price for each element.

cost overruns—in project design or construction, or both, the unanticipated increase in cost due to factors such as unanticipated site conditions, changes in the cost of building materials, labor, weather, and labor disputes.

cost professional—in project design or construction, or both, a person engaged in the occupation of understanding, managing or estimating project costs, or a combination thereof.

current dollars—dollars of purchasing power in which actual prices are stated, including inflation or deflation.

¹ This terminology is under the jurisdiction of ASTM Committee E-6 on Performance of Buildings and is the direct responsibility of Subcommittee E06.81 on Building Economics.

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